

UNCLASSIFIED

Defense Acquisition Challenge (DAC) Program



***Comparative Testing
Office***

***Advanced Systems &
Concepts***

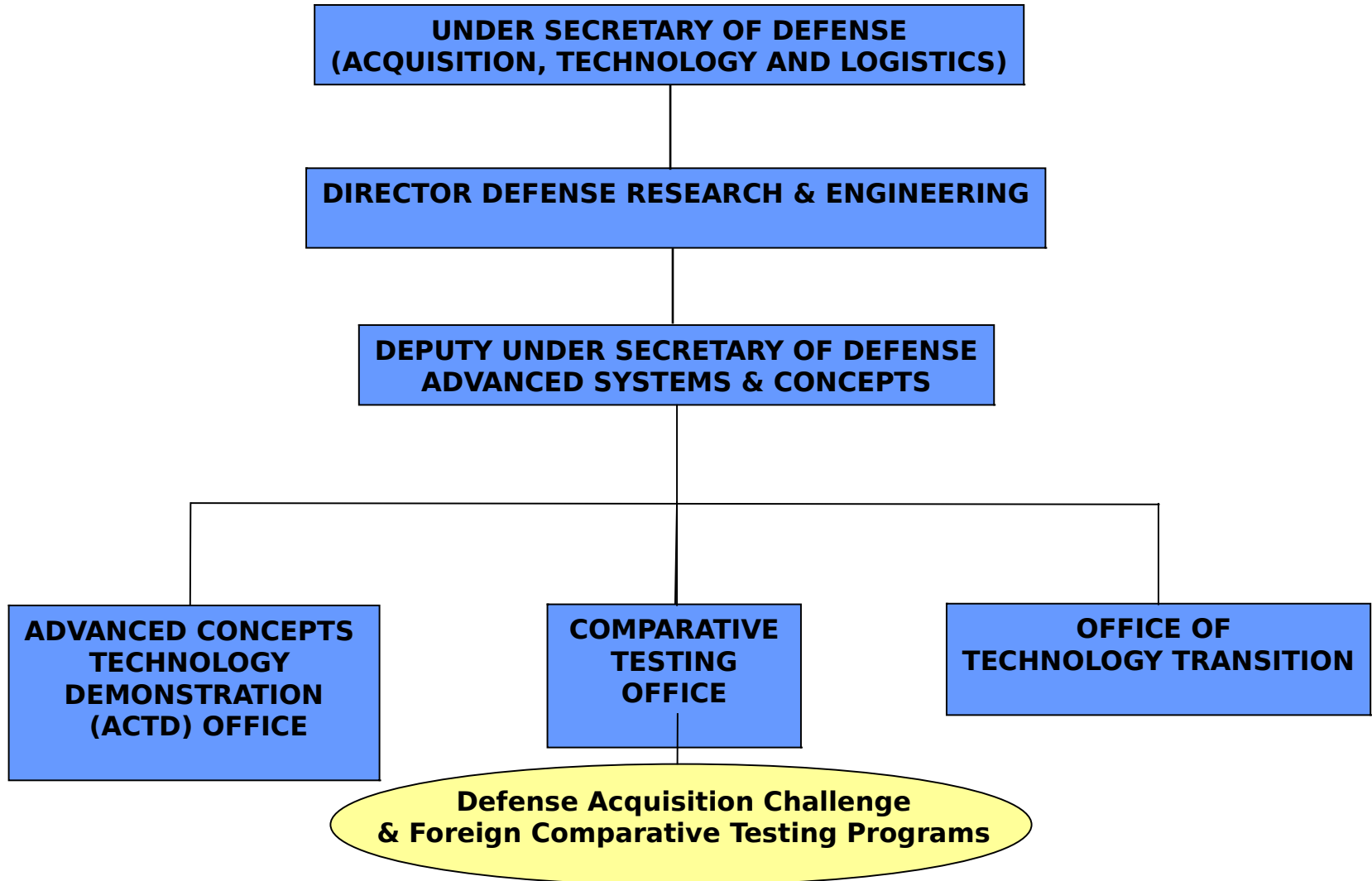
***Acquisition. Technology,
& Logistics***

Overview

W

- Authorized by Title 10, USC, Sec 2359b, the Defense Acquisition Challenge (DAC) Program provides *increased opportunities* for the introduction of *innovative and cost-saving technologies* into DoD acquisition programs. Provides an “on-ramp” to DoD acquisition system for small and medium vendors.
- DAC provides oversight and funds for the Test and Evaluation of technologies that have potential to improve current acquisition programs at component, subsystem, or system level
- DAC uses an established network of Service and U.S. Special Operations Command (USSOCOM) liaison offices

Organization in OSD



Evaluation Criteria

- Conduct an initial “panel” review of each proposal for:
 - Merit
 - Improvements in performance; affordability; manufacturability; operational capability at the component, subsystem or system level of an acquisition program
 - Rapid implementation at acceptable cost and without unacceptable disruption
- If the above criteria are satisfied, then a “full” review is completed by the program office and the prime system contractor
 - Independent review using the above criteria
 - Include assessment of the cost of adopting and implementing
 - Consideration of intellectual property rights

DAC provides companies an “on-ramp” into the defense acquisition system.

Selected On-Going DAC Projects

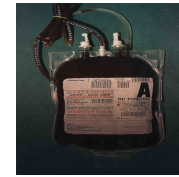
RESUS - Restore Effective Survival in Shock
Increases Survivability Rate of Soldiers during hemorrhagic shock; 3-yr shelf stable, no refrigeration required, compatible w/ all blood types

Air Force/Navy, BIOPURE, MA

Hemopure

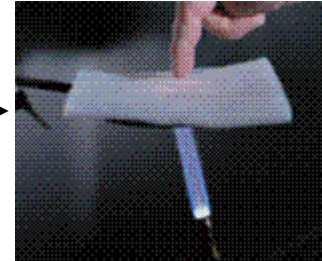


Packed red blood cells



Aerogel for Ships

Fire barrier, IR Suppression, Blast Mitigation, and Weight, Volume, Install Cost and Fuel Savings
Navy, Aspen Aerogels, MA



Friction Stir Processing

75% Reduction in propeller casting time for Virginia Class SUBS
Navy, MTS Corp, MN and General Tool Co, OH



X-Cor Replacement for Conventional Honeycomb

X-Cor™ is a lightweight, damage-tolerant core material that replaces conventional metal or honeycomb in aerospace structures. A 29% weight reduction and a 45-60% cost savings versus the baseline aluminum Blackhawk tail cone are estimated. Aztex, Inc., Waltham, MA



FY 06 DAC Process

- **FY 2006 DAC Program Status**

- 424 Draft Proposals were submitted by Industry and Government agencies with proposed technologies and products ranging from studies to near off the shelf capabilities
- ALL Draft Proposals were evaluated and prioritized based on potential and were reviewed by acquisition Programs of Record
- 74 Draft Proposals were “Accepted” by Program Managers
- 53 Final Proposals were submitted by Program Managers to compete for funding

For FY06 15 new-starts along with 12 “on-going” projects were approved for a total of \$28.9M

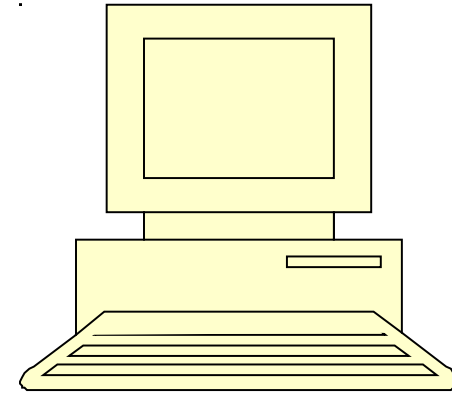
Solicitation for FY 2007

Document Type: BAA

Solicitation Number: TBD

Posted Date: TBD

Close Date: TBD



To submit a proposal you must register on CTO Portal homepage, then login, go to DAC and follow instruction set.

Anticipate the BAA for FY2007 will be posted on web in early December 2005 at:

www.fedbizopps.gov

<https://cto.acqcenter.com/osd/portal.nsf>

Two-Phase Process

Phase One

- Any person or activity within or outside the DoD interested in participating can submit a DAC proposal along with a quad chart using the templates provided in the BIDS website:
<https://cto.acqcenter.com/osd/portal.nsf> (unclassified only)
- All proposals receive:
 - ✓ Administrative Review
 - ✓ Technical Review
 - ✓ Program Manager Review
 - ✓ OSD Review
 - ✓ Selection/Non-selection
- Evaluation criteria for selection includes as a minimum
 - ✓ Does the proposal have merit?
 - ✓ Will the result achieve improvements in performance, affordability, manufacturability or operational capability?
 - ✓ Can the acquisition program be implemented rapidly and without disruption, at an acceptable cost? (*DAC focuses on technologies that are ready to transition – technology readiness levels 6-9*)

Proposals meeting above criteria are prioritized based on potential for providing innovative and cost-saving technologies to meet the DoD acquisitions programs and ability to meet the warfighter needs

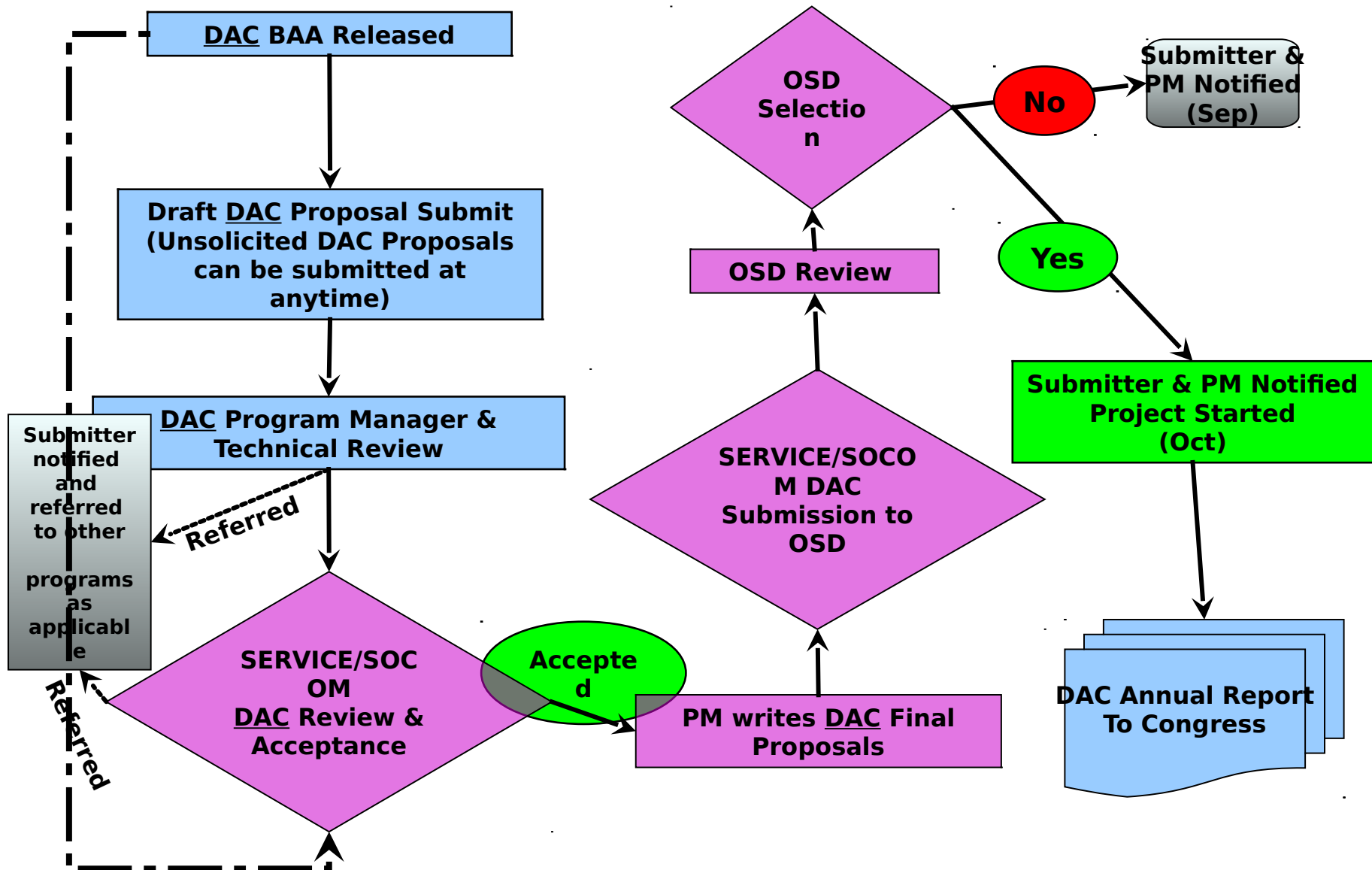
Two-Phase Process

Phase Two

- Sponsoring government program offices refine the first phase proposal addressing:
 - ✓ Key performance parameters
 - ✓ Preliminary test plan
 - ✓ Cost analysis
 - ✓ Funding required for test
 - ✓ Length of evaluation period
- DAC final proposal will need letter of endorsement with intent to procure, project chart, and quad chart
- Classified proposals can be accepted through the mail

Selection for funding is highly competitive and submitters are notified of the outcome of their proposal evaluation

DAC Proposal Process & Milestones



Steps for Submitting

1. Read submission guidelines
2. Submit Draft Proposal IAW guidelines
3. Contact the Service/USSOCOM DAC focal point to determine status and revise your Draft Proposal if more info needed
4. If Draft Proposal is “Accepted” by a Program of Record/Program Manager (PM) the PM, with the assistance of the item vendors, will submit a DAC Final Proposal

Projects with more than 24 months of test and evaluation will be considered case by case

Technology Readiness Levels

TRL 9 – actual application of technology under mission conditions

TRL 8 – actual system developmentally tested

TRL 7 – prototype tested in operational environment

TRL 6 – prototype system/subsystem lab tested

TRL 5 – breadboard validated in operational environment

TRL 4 – breadboard validated in lab

TRL 3 – proof of concept in labs

TRL 2 – technology concept formulated

TRL 1 – basic principles observed/reported—paper study

Minimum level is TRL 6 or 7 when proposed, but...
required TRL 8 or 9 by completion of DAC testing!

Extended Wear, Lubrication-Free M249 SAW



Technology

- UCT Defense wants to apply a Nickel Boron coating that is extremely hard and very lubricious to produce a lubrication-free version of the M249. This effort is to gain full safety confirmation from ATC, and conduct user evaluations by coating 136 M249s (~a Brigade).

The So What

- Extended service life, increased reliability, eliminating wet lubrication, has reduced maintenance requirements (especially in desert, fine-sand environments) and has significantly lower life cycle costs than the current M249.

Participants

- U.S. Army Picatinny Arsenal
- Universal Chemical Technology Defense, Stuart, FL

Schedule

Technical Test 2QFY05
Operational Test 2-4QFY05
Milestone C 4QFY05

POC: Al Trawinski, (703) 806-0999
PM: Andy Goetz, (973) 724-6324

Funding

Funding (\$K)	FY05	total
CTO	1595	1595
Sponsor	100	100

Benefits

RDTE Cost Savings: \$10M
O&S Cost Savings: \$1.39M annually
Procurement Cost Savings: \$0.65M annually
Fielding Reduction: none
Procurement Potential: \$13.0M (USA+SOF)

DAC Small Business Factoids

Of the companies participating:

- 202 of the 382 FY03/04 submissions were Small or Mid-sized Business
 - 14 of the 20 projects selected for FY03 DAC – 70% were Small or Mid-sized Business
 - 7 of the 10 projects selected for FY04 DAC – 70% were Small or Mid-sized Business
- 326 of the 582 FY05 submissions were Small or Mid-sized Business
 - 11 of the 15 projects selected for FY05 DAC – 70% were Small or Mid-sized Business

FY05 Defense Acquisition Challenge Program Participating Companies

Arizona

Raytheon Missile Systems,
Tucson

EOS, Tempe

California

SureFire LLC, Fountain Valley

Ambient Control System, El
Cajon

BAE Systems, San Diego

Florida

Structural Composites Inc.,
Melbourne

Universal Chemical
Technologies, Inc.; Stuart
Engine Tech, Ocala

Maine

Pepin Associates, Greenville

Massachusetts

Foster-Miller,
Waltham

Triton Systems,
Chelmsford

Michigan

Trijicon, Wixom

EO Tech, Ann Arbor

Missouri

ISW Group, St. Louis

ISW GROUP R&D, Creve Coeur

New Hampshire

Insight Technology,
Londonderry

New Jersey

USA-RDECOM-ARDEC Benet
Labs, Watervliet

New York

Telephonics Corporation,
Farmingdale

Ohio

US AFRL/MLLN, Wright
Patterson AFB

ECC Inc., Brooklyn Heights

Pennsylvania

Concurrent Tech Corp.,
Johnstown

Texas

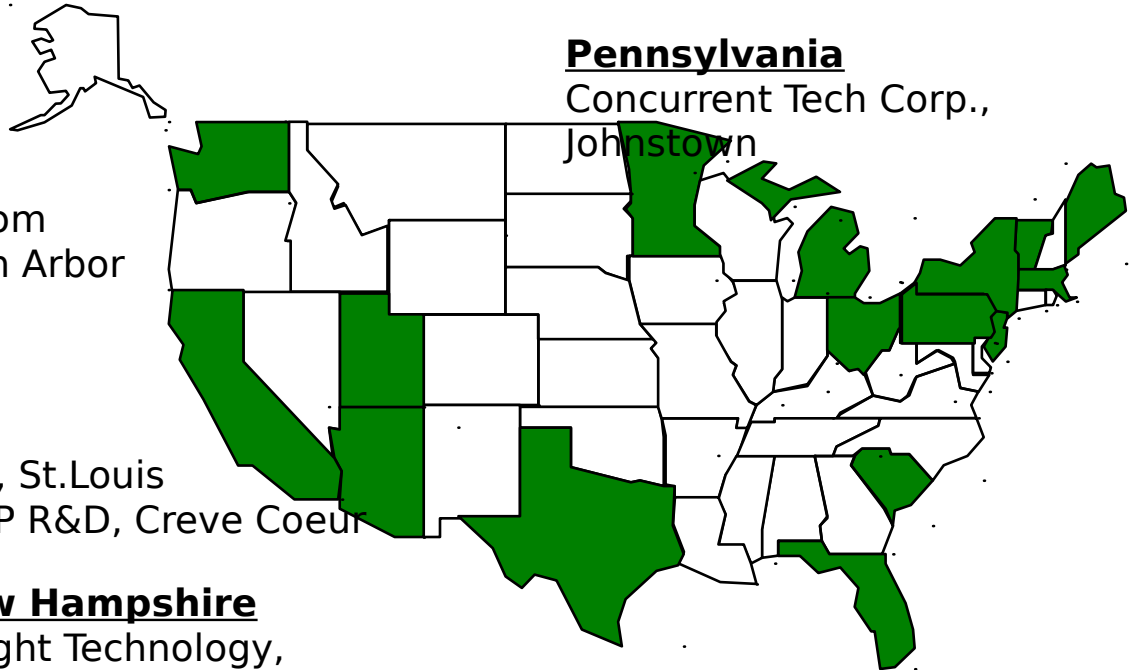
Raytheon, Richardson
Litton, Garland

Utah

LazerBrite, Salt Lake
City

Washington

ISR Inc., Liberty
Lake



Primary DAC Points of Contact

OSD Program Office	(703) 602-3
U.S. Army Focal Point	(703) 806-0999
U.S. Navy Focal Point	(215) 697-9528
U.S. Air Force Focal Point	(703) 588-6
USSOCOM Focal Point	(813) 828-9512

E-Mail: **defensechallenge@osd.mil**

Web:

<https://cto.acqcenter.com/osd/portal.nsf>